

Remarks

Claims 1-14, as amended, are pending in this application. In an Office Action mailed October 24, 2001, the Examiner rejected claims 1, 7 and 13 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner objected to claim 2. The Examiner further pointed out defects in the Specification. Claims 1, 7 and 13 have been amended to more distinctly claim Applicants' invention. The Specification has been amended to comply with references indicated in Figure 1.

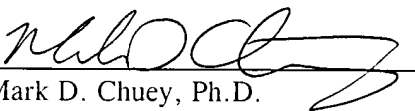
Claims 1-14, as amended, meet all substantive requirements for patentability. The case is in appropriate condition for allowance. Accordingly, such action is respectfully requested.

No fees are believed to be due. However, any fees due may be charged to Deposit Account No. 21-0456 as specified in the Application Transmittal.

The Examiner is invited to telephone the undersigned to discuss any aspect of this case.

Respectfully submitted,

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Attachment

**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the Specification:**

On page 7, lines 1-2, change "receiver 42, decoder 44, buffer 46, encoder 48, and line driver 50" to -- receiver 44, decoder 46, buffer 48, encoder 50, and line driver 52 --.

In the Claims:

- 1 1. (Amended) A system for distributing digital subscriber line
- 2 (XDSL) signals to end users over a telephone wiring plant comprising:
- 3 a central office for receiving video signals from a video source, the
- 4 central office including a first XDSL transmission unit for transmitting the received
- 5 video signals on a twisted pair copper cable along with other telephony and digital
- 6 data signals, and receiving data signals from end users;
- 7 at least one end user location having a second XDSL transmission unit
- 8 for receiving video signals from the twisted pair copper cable and transmitting data
- 9 signals to the central office; and
- 10 a regenerator connected to the twisted pair copper cable and located
- 11 a predetermined distance from the central office, the regenerator comprising:
- 12 a receiver for receiving XDSL signals transmitted on the
- 13 twisted pair copper cable from either the central office or the end user;
- 14 a decoder for decoding the payload of a received XDSL signal
- 15 into base data;
- 16 an encoder for repackaging and encoding the base data into a
- 17 desired protocol format; and
- 18 a line driver for retransmitting the encoded signal onto the
- 19 twisted pair copper cable for distribution to an [the] original destination,
- 20 wherein the predetermined distance for the location of the regenerator
- 21 [repeater] corresponds to a point on the twisted pair cable where the signal-to-

22 noise ratio of a transmitted XDSL signal reaches a threshold of minimum
23 acceptable signal quality.

1 2. (Amended) The system of claim 1 wherein the central office
2 transmits XDSL signal using an asynchronous transfer mode (ATM) protocol, and
3 the regenerator encoder is arranged to selectively repackage the base data into either
4 the ATM protocol format or a direct transmission protocol format depending on the
5 protocol requirements of the destination original [terminal].

1 7. (Amended) A method for distributing digital subscriber line
2 (XDSL) signals to end users over a telephone wiring plant comprising:
3 receiving video signals at a central office from a video source;
4 transmitting the received video signals on a twisted pair copper cable
5 along with other telephony and digital data signals as an XDSL type signal to a
6 terminal located at an end user site, and receiving data signals on the twisted pair
7 copper cable at the central office from an end user terminal;
8 coupling a signal regenerator unit to the twisted pair copper cable at
9 a distance from the central office corresponding to a point on the twisted pair cable
10 where the signal-to-noise ratio of a transmitted XDSL signal reaches a threshold of
11 minimum acceptable signal quality;
12 receiving transmitted XDSL signals at the regenerator, and decoding
13 the received signals into base data;
14 repackaging and encoding the base data into an XDSL signal having
15 a desired protocol format; and
16 retransmitting the XDSL signal to the end user [original destination]
17 terminal.

1 13. (Amended) A regenerator for use in a digital subscriber line
2 (XDSL) signal type signal distribution system, the distribution system including a
3 central office for transmitting video signals on a twisted pair copper cable along with

4 other telephony and digital data signals to at least one end user location, the
5 regenerator comprising:
6 a receiver for receiving XDSL signals transmitted on the twisted pair
7 copper cable from either the central office or the end user;
8 a decoder for decoding the payload of a received XDSL signal into
9 base data;
10 an encoder for repackaging and encoding the base data into a desired
11 protocol format; and
12 a line driver for retransmitting the encoded signal onto the twisted pair
13 copper cable for distribution to an [the] original destination, wherein a [the]
14 predetermined distance for the location of the regenerator [repeater] corresponds to
15 a point on the twisted pair cable where the signal-to-noise ratio of a transmitted
16 XDSL signal reaches a threshold of minimum acceptable signal quality.